

Appln No. 10/043,763

Amdt date October 3, 2003

Reply to Office action of July 30, 2003

REMARKS/ARGUMENTS

Claims 1-6 are currently pending in this application. Claims 1-6 have been amended to place them in better condition for allowance and added new claims 7-13. In view of the above amendments and following remarks, applicant respectfully submits that the application is in condition for allowance. Applicant therefore, respectfully requests reconsideration and allowance of the application.

The Examiner objected to claim 4 as being depend on a rejected base claim. The Examiner indicated however, that claim 4 would be allowable if rewritten in independent format incorporating all of the references of the base claim and any intervening claims. Applicant has rewritten claim 4 in independent format incorporating substantially all of the limitations of base claim 1 and intervening claim 2. Applicant therefore respectfully submits that claim 4 is allowable. Applicant further submits that claims 10-13 that depend directly or indirectly from claim 4 are allowable as is claim 4 and for additional limitations recited therein.

The Examiner rejected claims 5-6 under 35 U.S.C. 112 second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. More specifically, the Examiner alleges that there is no support in the specification for "providing bias_mid" to the input of a first semiconductor device as recited in claim 5. Applicant respectfully traverses this rejection."

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Amended claim 5 recites "providing bias_mid to a source of the first semiconductor device such that the first semiconductor device will turn off when $V_{DDO} - \text{bias_mid}$ is less than the threshold of the first semiconductor device". Applicant respectfully submits that transistor 1213 of Figure 12A provides support for the recited element. Applicant therefore respectfully requests that the 112 rejection of claim 5 be withdrawn. Further applicant has amended claim 6 in accordance with the Examiner's suggestion and therefore respectfully requests that the 112 rejection of claim 6 be withdrawn.

The Examiner rejected claims 1-3, 5 and 6 under 35 U.S.C. 102(b) as being anticipated by Bingham (U.S. Patent 4,617,473). Applicant respectfully traverses this rejection.

Independent claim 1 recites a method of protecting an integrated circuit from over voltage comprised in part by "coupling a bias voltage for the integrated circuit to a gate of a PMOS (P-channel Metal Oxide Semiconductor) device when the power supply is below the predetermined value; and coupling the pad voltage to a bias_mid node through the PMOS device to provide the bias voltage for the integrated circuit when the power supply is below the predetermined value." (underlining added for emphasis only). Applicant respectfully submits that Bingham does not disclose or suggest the recited limitations.

Rather, as indicated by the Examiner, in the switching circuit of Bingham the bias voltage (at node 30) is coupled to a gate of PMOS device 132 via MOS device 110 when the power supply voltage (at node 24) is below a predetermined level and the pad voltage (at node 26) is coupled to bias_mid at node 30 through

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MOS device 48. (Bingham FIG. 3, col. 6, line 59 - col. 7, line 24). Thus, unlike claim 1 of the present invention, in the switching circuit of Bingham the gate of a first MOS device (device 132) is driven by the bias voltage and a second MOS device couples the pad voltage to the bias_mid node.

Accordingly, applicant respectfully submits that claim 1 recites a novel and unobvious apparatus over Bingham and is therefore allowable. Applicant further submits that claims 2-4 that depend directly or indirectly from claim 1 are allowable as is claim 1 and for additional limitations recited therein.

Similarly, independent claim 5 recites a method for generating a bias voltage (bias_mid) from a pad voltage (Vpad), when a power supply (V_{DD0}) is not present comprised in part by "providing bias_mid to a gate of a MOS device in response to the turn off of the first semiconductor device to turn on the MOS device to couple Vpad to bias_mid." Applicant respectfully submits that Bingham does not disclose or suggest the recited limitations.

Rather, in the switching circuit of Bingham illustrated in FIG. 3, an indicator output voltage (at node 32), not bias_mid as recited in claim 5 of the present invention, is coupled to the gate of MOS device 48 which, when turned on, couples Vpad to bias_mid. Accordingly applicant respectfully submits that claim 5 recites a novel and unobvious method over Bingham and is allowable. Applicant further submits that claims 6-9 that depends on claim 5 are allowable as is claim 5 and for additional limitations recited therein.

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It is therefore respectfully submitted that pending claims 1-9 are in condition for allowance, and an early notice of allowance is respectfully requested.

Respectfully submitted,

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